FORM AE-100

DEPARTMENT OF TRAN STATEMENT OF COMPLIANCE OF AIRC COMPONENTS WITH THE AIRWORTHIN	AE-100 No.: Initial Issue Date: Revision: Revision Date:	AE800-2 25 March, 2009 0	
Aircraft Mfr: Bell Aircraft Model: 206L Series / 407 Registration: ALL ELIGIBLE	Model / Type Airplane	Approval No.: Delegation No.: Delegate Name: Company:	SH00-48 290M E. Burgoin AERO Design Ltd.
1.14	OT OF ADDDOVED DEDO	DEC AND DATA	

	LIST OF APPROVED REPORTS AND DATA				
Document Number	Revision	Document Title	Compliance Status		
DCL800-2 DCL800-12 ER800.02 80002 80010 80020	0 0 0 0 1 0	Document Control List and all documents referred to therein Document Control List and all documents referred to therein Engineering Report Quick Release Step Installation Step Assembly Step End Fabrication	As per Compliance Program, CP800-2, Revision 0		
		DATA APPROVED BY TRANSPORT CANADA			
ICA800.90 FMS701.90 FMS702.90	2 2 2 2	Instructions for Continued Airworthiness Flight Manual Supplement Flight Manual Supplement			

CERTIFICATION

UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED NII HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIRMENTS.

I THEREFORE

RECOMMEND FOR APPROVAL OF THESE DATA $[\square]$

 $[\boxtimes]$ APPROVE THESE DATA

目. Burgoin, DAR 290M





780-495-7963

800-2

Your file Votre référence

Our file Notre reference C-08-1002 5010-0402

1100-9700 Jasper Avenue Edmonton, Alberta T5J 4E6

March 24, 2009

AERO Design Limited 2013 39 Ave. NE Calgary, AB T2E 6R7

ATTENTION: Ted Burgoin - DAR 290M

Dear Sirs:

SUBJECT: Extension of DAR 290M Authority - Bell 206L/407, Quick Release Step

Installation, NAPA File C-08-1002, SH00-48 - Issue 7

This is in response to your 3 December 2008 request for extension of delegation to cover the subject design change. You are hereby authorized to make findings of compliance for the following Compliance Paragraphs as listed in Compliance Plan CP800-2:

27.251 Vibration 27.629 Flutter

This is a one-time extension and is limited to be exercised for this NAPA file only.

If you have any questions or wish to discuss this project further, please contact the project OPI, Jack Staal, at the Edmonton TCC office.

Yours truly,

F.J.B. Wright

Regional Manager Aircraft Certification

Prairie and Northern Region

Phone: (780) 495-3856 Fax: (780) 495-7963





1100, 9700 Jasper Avenue Edmonton, Alberta T5J 4E6

Your like 00-2

Our file

Notre référence

C-08-1002 5010-0402

March 26, 2009

AERO Design Ltd 2013 39 Ave. NE Calgary, AB T2E 6R7

Dear Sirs:

Attached is a corrected delegation letter reflecting the proper subject to be a Elell 206I/407, Quick Release Step Installation. This letter supersedes the previously faxed letter of the same date which incorrectly referred to the subject as a Bell 206B, Quick Release Cargo Basket Installation. Other aspects of the letter remain unchanged.

Sincerely,

J. /Staal

Aircraft Certification Technologist

Prairie and Northern Region

Ph 780-495-5227

Fax 780-495-7963 (fax)

Canad'ä



Transports Canada

1100-9700 Jasper Avenue Edmonton, Alberta T5J 4E6

800-2

Your file

Vatre ráfárance

Notre référence C-08-1002 5010-0402

March 24, 2009

AERO Design Limited 2013 39 Ave. NE Calgary, AB T2E 6R7

ATTENTION: Ted Burgoin - DAR 290M

JOBL STEP

Dear Sirs:

SUBJECT:

Extension of DAR 290M Authority - Bell 206B, Quick Release Cargo Basket Installation, NAPA File C-08-1002, SH00-48 - Issue 7

This is in response to your 3 December 2008 request for extension of delegation to cover the subject design change. You are hereby authorized to make findings of compliance for the following Compliance Paragraphs as listed in Compliance Plan CP800-2:

27.251 Vibration 27.629 Flutter

This is a one-time extension and is limited to be exercised for this NAPA file only.

If you have any questions or wish to discuss this project further, please contact the project OPI, Jack Staal, at the Edmonton TCC office.

Yours truly

F.J.B. Wright

Regional Manager Aircraft Certification

Prairie and Northern Region Fhone: (780) 495-3856

Fax:

(780) 495-7963

125 5/69 18

From: Jeff Clarke [jeff@aerodesign.ca]

Sent: December 5, 2008 2:43 PM

To: 'Staal, Jack'

Subject: RE: C-08-1002 - Bell 206L/407 Quick Release Step (4)

Attached are the revised mounting beam drawings, and a draft of the STC.

Description of the changes:

The existing mounting beams for the Bell 206L/407 Quick Release Cargo Basket are modified with an extra keyway near the bottom to mount the step. The existing locking mechanism for the basket is also used for the step. A set of keyways are put on the inboard side of the beam to store the step when the cargo basket is in use, with the same locking mechanism as for the basket.

Please advise when have reviewed the package, and provide extension of delegation, and I will get Ted to sign off on the AE-100 forms. Let me know if you have any questions.

Regards,

Jeff

From: Jeff Clarke [jeff@aerodesign.ca]

Sent: December 5, 2008 2:35 PM

To: 'Staal, Jack'

Subject: RE: C-08-1002 - Bell 206L/407 Quick Release Step (3)

Attached are the Bell 206L Installation drawings, and changes to the FMS to include the step installation instructions.

Jeff

From: Jeff Clarke [jeff@aerodesign.ca]

Sent: December 5, 2008 2:33 PM

To: 'Staal, Jack'

Subject: RE: C-08-1002 - Bell 206L/407 Quick Release Step (2)

Attached are the Bell 407 Installation drawings, and changes to the FMS to include the step installation instructions.

Jeff

From: Jeff Clarke [jeff@aerodesign.ca]

Sent: December 5, 2008 2:31 PM

To: 'Staal, Jack'

Subject: RE: C-08-1002 - Bell 206L/407 Quick Release Step (1)

Jack,

Please find attached documents related to the Bell 206L/407 Quick Release Step. I will send this in a number of emails because some of the files are a little large.

Attached are the drawings, reports, and ICA for the Step itself.

Jeff

From: Staal, Jack [mailto:jack.staal@tc.gc.ca]

Sent: December 5, 2008 9:50 AM

To: Jeff Clarke

Cc: Oucharek, Greg; Dubyk, Debbie

Subject: RE: C-08-1002 - Bell 206L/407 Quick Release Step

Jeff,

Sorry been out a few days. Email would suffice, I could get Deb to load drwgs into NAPA.

As for the 600N I do not have anything on that. Suggest you check with Greg if you sent it to Greg.

Regards, jack

J.H. (Jack) Staal

Aircraft Certification Technologist | Technologue, Certification des aeronefs.

Prairie and Northern Region | Region des Prairies et du Nord

Telephone | telephone: (780)495-5227
Facsimilie | telecopier: (780)495-7963
Email | courriel: jack.staal@tc.gc.ca
TTY / ATS: 1-888-675-6863

Transport Canada | Transports Canada 1100- 9700, Jasper Avenue | avenue Jasper (RAED) Edmonton, AB T5J 4E6

Government of Canada | Gouvernement du Canada To provide feedback to TCCA, use CAIRS. See:

http://www.tc.gc.ca/CivilAviation/ManagementServices/QA/cairs.htm

Pour tout commentaire a TCAC, utilizer CAIRS. Voir http://www.tc.gc.ca/AviationCivile/ServicesdeGestion/AQ/ssqac.htm

----Original Message-----

From: Jeff Clarke [mailto:jeff@aerodesign.ca] Sent: Thursday, December 04, 2008 9:45 AM

To: Staal, Jack

Subject: C-08-1002 - Bell 206L/407 Quick Release Step

Jack,

I am having problems uploading documents into NDWL. Dennis has contacted someone for me to try and get the problem resolved.

Would you prefer to have paper copies of the drawings/reports, or can I email them?

Also, will you be dealing with the MD600N basket that I submitted last week to Greg?

Regards,

Jeff Clarke, CET

AERO Design Ltd. 2013 39th Avneue NE Calgary, Alberta, Canada T2E 6R7

Phone: 403.250.8027 Fax: 403.250.8333



DOCUMENT NO.	DOCU	MENT CONTENT	REVISION
INSTALLATION DOCUMENTS			
80002	Quick Release Step	Installation	0
ICA800.90	Instructions for Con	tinued Airworthiness	2
FMS701.90 FMS702.90	Flight Manual Supp Flight Manual Supp	2 2	
FABRICATION DOCUMENTS			
DCL800-12	Document Control L	ist for Quick Release Step	0
ENGINEERING DOCUMENTS			
APPROVAL:	ORIGINAL DATE:	<i>AERO</i> DESIGN	LLTD
	2 December, 2008	2013 – 39 th Ave NE, Calgary, All	perta, T2E 6R7
	REVISION DATE:	Ph. (403) 250-802 Fax. (403) 250-833 www.aerodesign.c	3
	SHEET 1 OF 1	Bell 206L Series Quick Release Installation	Step
	DC	L800-2	0



DOCUMENT NO.	DOCU	MENT CONTENT	REVISION
FABRICATION DOCUMENTS			
80010 80020	Step Assembly Step End Fabrication	n	1
	,		
ENGINEEDING DOCUMENTS			
ENGINEERING DOCUMENTS ER800.02	Engineering Benert		0
ER000.02	Engineering Report		U
	ė.		
APPROVAL:			
THE THE	ORIGINAL DATE:	AERO DESIGN	NLTD.
	2 December, 2008 REVISION DATE:	2013 – 39 th Ave NE, Calgary, All Ph. (403) 250-802	perta, T2E 6R7 7
	NEVISION BATE.	Fax. (403) 250-833 www.aerodesign.c	3
	SHEET 1 OF 1	Bell 206L Series Quick Release Fabrication	Step
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	DCI	_800-12	0
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DOCUMENT NO.	DOCU	MENT CONTENT	REVISION
FABRICATION DOCUMENTS			
69831 69831	Forward Beam Fabricatio		3 3
ENGINEERING DOCUMENTS			
ER698.02 TP698.03 ER698.04	Engineering Report Test Plan Engineering Report		0 0 0
APPROVAL:	ORIGINAL DATE:	AEDO DEGION	
	3 May, 2006 REVISION DATE: 2 December, 2008	AERO DESIGN 2013 – 39 th Ave NE, Calgary, Alt Ph. (403) 250-802 Fax. (403) 250-833	perta, T2E 6R7
	SHEET 1 OF 1	Quick Release Mount	ing Beams
	DC	L698-2	3



DOCUMENT NO.	DOCU	MENT CONTENT	REVISION
INSTALLATION DOCUMENTS			
70201 70202	Quick Release Carg Quick Release Moun	3 0	
ICA698.90	Instructions for Conf	inued Airworthiness	1
FMS702.90	Flight Manual Suppl	2	
FABRICATION DOCUMENTS			
DCL698-1 DCL698-2	Document Control L Document Control L	ist for Quick Release Cargo Basket ist for Beams	1 3
ENGINEERING DOCUMENTS			
APPROVAL:	ORIGINAL DATE: 10 May, 2006 REVISION DATE: 2 December, 2008	AERO DESIGN 2013 – 39 th Ave NE, Calgary, All Ph. (403) 250-802' Fax. (403) 250-833	perta, T2E 6R7 7
	SHEET 1 OF 1	Bell 206L Seri Quick Release Carg Installation	o Basket
	DO	CL702	2



DOCUMENT NO.	DOCU	MENT CONTENT	REVISION
INSTALLATION DOCUMENTS			
70101 70102	Quick Release Carg Quick Release Mou	3 0	
ICA698.90	Instructions for Con	tinued Airworthiness	1
FMS701.90	Flight Manual Suppl	ement	2
SI698.91	Service Instructions	 Sliding Door Modification 	0
FABRICATION DOCUMENTS			
DCL698-1 DCL698-2	Document Control L Document Control L	ist for Quick Release Cargo Basket ist for Beams	1 3
ENGINEERING DOCUMENTS			
APPROVAL:	ORIGINAL DATE: 10 May, 2006 REVISION DATE: 2 December, 2008	AERO DESIGN 2013 – 39 th Ave NE, Calgary, All Ph. (403) 250-802' Fax. (403) 250-833	perta, T2E 6R7
	SHEET 1 OF 1	Bell 407 Quick Release Carg Installation	
	D	CL701	3

Department of Transport

Supplemental Type Certificate

This approval issued to:

AERO Design Ltd. 2013 - 39th Avenue NE Calgary, Alberta T2E 6R7 Approval Number:

SH00-48

Issue Number.:

7

Date of Approval:

8 December, 2000

Date of Issue:

Responsible Office:

Prairie and Northern

Aircraft / Engine Type:

Bell

Model:

206L, L-1, L-3, L-4

407

Registration:

All Eligible

Serial No.:

All Eligible

Canadian Type Certificate or Equivalent:

H-92

Installation of External Attachment Provisions

Description of Design Change:

Installation of Cargo Basket Installation of Auxiliary Step

Installation of Quick Release Step

Required Equipment and Limitations:

Bell 407 Only:

Configuration A – External Attachment Provisions Only:

Installation of the External Attachment Provisions is to be completed in accordance with Transport Canada approved, AERO Design Ltd., Document Control List DCL700, Rev. 1, dated 28 September 2007, or later approved revision.

AERO Design Ltd., Instructions for Continued Airworthiness ICA700.90, Revision 0, dated 3 May 2006, or later accepted revision, is required with this installation.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS700.91, Revision 0, dated 4 May 2006, or later approved revision, is required with this installation.

External Attachment Provisions installed in accordance with DCL700 may remain installed if the basket installation is removed.

(see continuation sheet...)

Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.

Approval Number: SH00-48

Issue Number: 7

Date of Approval: 8 December, 2000

Date of Issue:

Approval Data (Continued):

NOTE: THIS ADDENDUM SHALL REMAIN PART OF THE CERTIFICATE REFERRED TO THEREIN.

Bell 407 Only (Continued):

Configuration B - External Cargo Basket Installation (Low Mounted Fixed):

Installation of Configuration A, External Attachment Provisions, is a prerequisite for installation of Configuration B, External Cargo Basket Installation. Installation of the External Cargo Basket is to be completed in accordance with Transport Canada Approved, AERO Design Ltd., Document Control List DCL606, Revision 3, dated 28 September 2007, or later approved revision. High skid gear is required for the basket installation. Placard is required on the basket lid.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 606.01, Revision 2, dated 28 September 2007, or later approved revision, is required with this installation.

AERO Design Ltd., Instructions for Continued Airworthiness ICA492.90, Revision 1, dated 28 September 2007, or later accepted revision, is required with this installation.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

Configuration C - External Cargo Basket Installation (High Mounted Fixed):

Installation of Configuration A, External Attachment Provisions, is a prerequisite for installation of Configuration C, External Cargo Basket Installation. Installation of the External Cargo Basket is to be completed in accordance with Transport Canada Approved, AERO Design Ltd., Document Control List DCL606-1, Revision 0, dated 1 February 2005, or later approved revision. Approved emergency exit "push-out" windows or an approved sliding door are required on the side of the helicopter that the basket is installed on if passengers are to be carried. Placard is required on the basket lid.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 606.01, Revision 1, dated 01 February 2005, or later approved revision, is required with this installation.

AERO Design Ltd., Maintenance Instructions MI 606.01, Revision 2, dated 19 July 2004, or later accepted revision, is required with this installation.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

Configuration D – External Cargo Basket Installation (Low Mounted Quick Release):

Installation of Configuration A, External Attachment Provisions, is a prerequisite for installation of Configuration D, External Cargo Basket Installation. Installation of the External Cargo Basket is to be completed in accordance with Transport Canada Approved, AERO Design Ltd., Document Control List DCL701, Revision 3, dated 2 December 2008, or later approved revision. High skid gear is required for the basket installation. Placard is required on the basket lid.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 701.90, Revision 2, dated 17 July 2008, or later approved revision, is required with this installation.

AERO Design Ltd., Instructions for Continued Airworthiness ICA698.90, Revision 1, dated 9 November 2006, or later accepted revision, is required with this installation.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

Approval Number: SH00-48

Issue Number: 7

Date of Approval: 8 December, 2000

Date of Issue:

Approval Data (Continued):

NOTE: THIS ADDENDUM SHALL REMAIN PART OF THE CERTIFICATE REFERRED TO THEREIN.

Bell 407 Only (Continued):

Configuration E - External Cargo Basket Installation (High Mounted Quick Release):

Installation of Configuration A, External Attachment Provisions, is a prerequisite for installation of Configuration E, External Cargo Basket Installation. Installation of the External Cargo Basket is to be completed in accordance with Transport Canada Approved, AERO Design Ltd., Document Control List DCL766-1, Revision 0, dated 26 September 2007, or later approved revision. Approved emergency exit "push-out" windows or an approved sliding door are required on the side of the helicopter that the basket is installed on if passengers are to be carried. Placard is required on the basket lid.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 766.91, Revision 0, dated 30 October 2007, or later approved revision, is required with this installation.

AERO Design Ltd., Instructions for Continued Airworthiness ICA 766.90, Revision 0, dated 26 September 2007, or later accepted revision, is required with this installation.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

Bell 206L, L-1, L-3, L-4 Only:

Configuration A – External Attachment Provisions Only:

Installation of the External Attachment Provisions is to be completed in accordance with Transport Canada approved, AERO Design Ltd., Document Control List DCL493, Rev. 6, dated 10 May 2006, or later approved revision.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 493.01, Revision 0, dated 19 May 2002, or later approved revision, is required with this installation.

AERO Design Ltd., Instructions for Continued Airworthiness ICA493.90, Revision 0, dated 4 May 2006, or later accepted revision, is required with this installation.

External Attachment Provisions installed in accordance with DCL493 may remain installed if the basket installation is removed.

Configuration B - External Cargo Basket Installation (Low Mounted Fixed):

Installation of Configuration A, External Attachment Provisions, is a prerequisite for installation of Configuration B, External Cargo Basket Installation. Installation of the cargo basket is to be completed in accordance with Transport Canada Approved, AERO Design Ltd., Document Control List DCL492, Revision 6, dated 28 September 2007, or later approved revision. High skid gear is required for the basket installation. Placard is required on the basket lid.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 492.01, Revision 2, dated 28 September 2007, or later approved revision, is required with this installation.

AERO Design Ltd., Instructions for Continued Airworthiness ICA492.90, Revision 1, dated 28 September 2007, or later accepted revision, is required with this installation.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets, plus FAR 27 at amendment 27-24.

Approval Number:

SH00-48

Issue Number:

Date of Approval: 8 December, 2000

Date of Issue:

Approval Data (Continued):

NOTE: THIS ADDENDUM SHALL REMAIN PART OF THE CERTIFICATE REFERRED TO THEREIN.

Bell 206L, L-1, L-3, L-4 Only (continued):

Configuration C - External Cargo Basket Installation (Low Mounted Quick Release):

Installation of Configuration A, External Attachment Provisions, is a prerequisite for installation of Configuration C, External Cargo Basket Installation. Installation of the External Cargo Basket is to be completed in accordance with Transport Canada Approved, AERO Design Ltd., Document Control List DCL702, Revision 2, dated 2 December 2008, or later approved revision. High skid gear is required for the basket installation. Placard is required on the basket lid.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 702.90, Revision 2, dated 17 July 2008, or later approved revision, is required with this installation.

AERO Design Ltd., Instructions for Continued Airworthiness ICA698.90, Revision 1, dated 9 November 2006, or later accepted revision, is required with this installation.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

Configuration D - External Cargo Basket Installation (High Mounted Quick Release):

Installation of Configuration A, External Attachment Provisions, is a prerequisite for installation of Configuration E, External Cargo Basket Installation. Installation of the External Cargo Basket is to be completed in accordance with Transport Canada Approved, AERO Design Ltd., Document Control List DCL766-1, Revision 0, dated 26 September 2007, or later approved revision. Approved emergency exit "push-out" windows or an approved sliding door are required on the side of the helicopter that the basket is installed on if passengers are to be carried. Placard is required on the basket lid.

Transport Canada approved, AERO Design Ltd., Flight Manual Supplement FMS 766.92, Revision 0, dated 30 October 2007 is required with this installation.

AERO Design Ltd., Instructions for Continued Airworthiness ICA 766.90, Revision 0, dated 26 September 2007 is required with this installation

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

All Models (Bell 206L Series and 407):

Auxiliary Step Installation:

Installation of the Auxiliary Step is to be completed in accordance with Transport Canada approved, AERO Design Ltd., Document Control List DCL623, Rev. 0, dated 13 January 2005, or later approved revision.

The Auxiliary Step is optional and is not required with cargo basket installations listed above.

Auxiliary Step installed in accordance with DCL623 may remain installed if the basket installation is removed.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

Cargo Basket Modifications:

Modifications to the above listed cargo basket configurations to be completed in accordance with Transport Canada approved, AERO Design Ltd., Document Control List DCL704, Rev. 0, dated 10 May 2006, or later approved revision. Eligibility limitations are noted on the drawings.

Approval Number: SH00-48

Issue Number: 7

Date of Approval: 8 December, 2000

Date of Issue:

Approval Data (Continued):

NOTE: THIS ADDENDUM SHALL REMAIN PART OF THE CERTIFICATE REFERRED TO THEREIN.

All Models (Bell 206L Series and 407) (continued):

Quick Release Step Installation:

Installation of the Low Mounted Quick Release Cargo Basket (407 - Configuration D; 206L - Configuration C) is required prior to installation of the Quick Release Step. Installation of the Quick Release Step is to be completed in accordance with Transport Canada approved, AERO Design Ltd., Document Control List DCL800-2, Rev. 0, dated 2 December 2008, or later approved

The Quick Release Step is optional and is not required with the Quick Release Cargo Basket Installation. The Quick Release Step may be stowed in the inboard position on the mounting provisions when the Quick Release Cargo Basket is installed.

AERO Design Ltd., Instructions for Continued Airworthiness ICA 800.90, Revision 2, dated 2 December 2008, or later accept revision, is required with this installation.

Basis of Certification is as defined by the applicable Type Certificate Data Sheets.

Page 5 of 5

BELL 407

ROTORCRAFT FLIGHT MANUAL SUPPLEMENT for the INSTALLATION of the AERO DESIGN QUICK RELEASE CARGO BASKET AND/OR QUICK RELEASE STEP

Supplemental Type Certificate No. SH00-48

Sections I, II, III and IV of this document comprise the Transport Canada Approved sections of this Flight Manual Supplement. Compliance with Section I, Limitations, is mandatory.

Section V and any subsequent sections if present are Unapproved and are provided for information only.

The information and data contained in this Flight Manual Supplement supersede or supplement that contained in the basic Approved Flight Manual for the Bell 407 when fitted with the Quick Release Cargo Basket or Quick Release Step Installation. For limitations, procedures and performance not listed in this Flight Manual Supplement, refer to the Approved Flight Manual and other approved Flight Manual Supplements.

Table of Contents

1	Limitations	3
11	Normal Procedures	3
Ш	Emergency Procedures	3
IV	Performance	4
V	Weight and Balance	5
VI	Installation / removal instructions	7

Record of Revisions

Revision	Issue Date	Pages Revised	Date Inserted	Ву
0	05 May, 2006	None		
1	09 Nov, 2006	2, 6		
2	17 July, 2008	All		

I LIMITATIONS

- 1. The maximum load in the AERO Design Ltd. Quick Release Cargo Basket is 200 lb. (90.5 kg).
- Flight operations limited to VFR conditions with AERO Design Ltd. Cargo Basket installed.
- 3. Maximum lateral or rearward speed limited to 25 KIAS.
- 4. Maximum winds from aft quadrants limited to 25 KIAS for takeoff, landing or hover flight.
- 5. V_{NE} is 140 KIAS except when the V_{NE} of the basic rotorcraft is more restrictive, in which case the lower V_{NE} applies.
- 6. Quick Release Step may be installed when the basket is removed.

II NORMAL PROCEDURES

- 1. Pre-flight inspections:
 - Ensure that all cargo stored in the cargo basket does is properly tied down and secured for flight.
 - b) Ensure that the lid of cargo basket is closed and secured.
 - c) Ensure the basket is locked in postion on the beams. Pull up on the forward and aft end of the basket to check.
 - d) Ensure the step is locked in position on the beams. Pull up on the forward and aft end of the step to check.

CAUTION

It is possible to exceed the lateral centre of gravity limits of the rotorcraft under some loading conditions. Pilots must ensure that lateral C of G is within limits when loading the basket.

III EMERGENCY PROCEDURES

No change from basic Approved Flight Manual.

CAUTION:

The rotorcraft glide angle is steeper than that of the basic helicopter when the AERO Design Ltd. Cargo Basket is installed.

AERO DESIGN LTD.

FMS701.90

IV PERFORMANCE

Climb performance may be reduced by up to 200 fpm.
Cruise speeds are reduced by approximately 10 kts. (11 mph).

Revision 2 17 July, 2008 Page 4
TRANSPORT CANADA APPROVED

V WEIGHT AND BALANCE

 The following weight and balance is for the low mounted quick release cargo basket configuration, installed in accordance with drawing 70101.

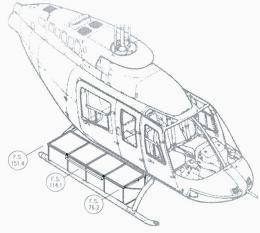


Figure 1 – Low Mounted Quick Release Cargo Basket Configuration

Low Mounted Quick Release Cargo Basket Configuration

Item Weight		Longitudinal		Lateral	
	rroigin	Arm	Moment	Arm	Moment
Basket	45.0 lb	114.1 in	5134 in*lb	38.5 in	1733 in*lb
Only ¹	20.4 kg	2898 mm	59 122 mm*kg	978 mm	19 949 mm*kg
Cargo ²	200 lb	114.1 in	22 820 in*lb	38.5 in	7700 in*lb
(MAX)	90.9 kg	2898 mm	263 467 mm*kg	978 mm	88 900 mm*kg

¹ Weight and balance is for Cargo Basket only. Mounting beams and attachment provisions are not included since they should have been included in the basic rotorcraft weight and balance at time of initial installation.

CAUTION:

It is possible to exceed lateral CG limits in some configurations.

² Longitudinal and Lateral moment arms are given only for the center of the Cargo Basket. Due to the length of the basket, some loading arrangements may require that actual moment arms be measured, to determine the correct moments about the center of gravity.

2. The following weight and balance is for the quick release step configuration, installed in accordance with drawing 80002.

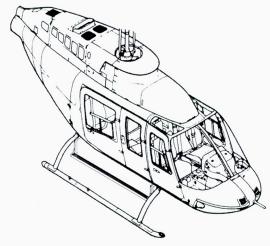


Figure 2 – Low Mounted Quick Release Cargo Basket Configuration

Low Mounted Quick Release Step Configuration

Item	Weight	Lo	ngitudinal		Lateral
	lg	Arm	Moment	Arm	Moment
Step	8.2 lb	114.1 in	935.6 in*lb	29.3 in	239.9 in*lb
Only ¹	3.7 kg	2898 mm	10 723 mm*kg	744 mm	2 754 mm*kg

Low Mounted Quick Release Step Configuration (Stowed Position)

Item	tem Weight Lor		ngitudinal		Lateral
		Arm	Moment	Arm	Moment
Step	8.2 lb	114.1 in	935.6 in*lb	23.7 in	194.3 in*lb
Only ¹	3.7 kg	2898 mm	10 723 mm*kg	602 mm	2 227 mm*kg

¹ Weight and balance is for Step only. Mounting beams and attachment provisions are not included since they should have been included in the basic rotorcraft weight and balance at time of initial installation.

VI INSTALLATION / REMOVAL INSTRUCTIONS

The Quick Release Mounting Provisions are installed in accordance with drawing 70102. The Quick Release Basket is installed in accordance with drawing 70101. The Quick Release Step is installed in accordance with drawing 80002. Removal of the basket or step leaving the beams in place is an approved configuration for flight. Logbook entry indicating installation or removal of basket or step and which weight and balance amendment is in effect is required.

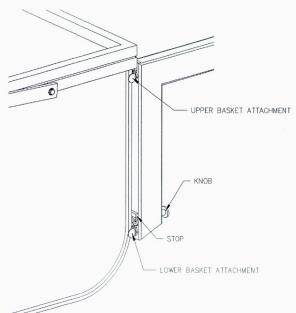


Figure 3 - Basket Attachment

- 1. Basket Installation Refer to Figure 3.
 - 1. Set basket upper attachment into slot on forward and aft beams.
 - At forward end of basket, lift until lower attachment fitting hits stop over keyway. Push fitting into keyway and slide basket down until locked. Repeat for aft end.
- 2. Basket Removal Refer to Figure 3.
 - Pull knob at bottom end of forward beam and lift basket until lower attachment fitting is free of keyway. Keep upper basket attachment in slot in beam. Repeat for aft end.
 - 2. Lift basket until upper attachments are out of slots on beams and remove basket from helicopter.

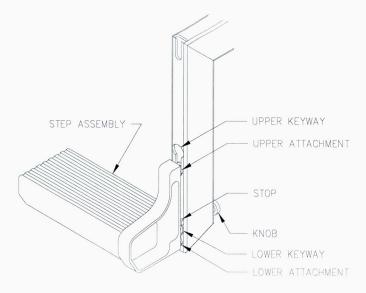


Figure 4 – Step Attachment

- 3. Step Installation Refer to Figure 4.
 - 1. Set upper attachment into upper keyway on forward and aft beams.
 - Lift step until lower attachment hits stop over keyway. Push fitting into keyway and slid down until locked.
- 4. Step Removal Refer to Figure 4.
 - 1. Pull knob at bottom end of forward beam and lift step until the lower attachment fitting is free of keyway. Keep upper attachment in keyway in beam. Repeat for aft end.
 - 2. Lift step until upper attachments are out of keyways in beams and remove from helicopter.

BELL 206L SERIES

ROTORCRAFT FLIGHT MANUAL SUPPLEMENT for the INSTALLATION of the AERO DESIGN QUICK RELEASE CARGO BASKET AND/OR QUICK RELEASE STEP

Supplemental Type Certificate No. SH00-48

Sections I, II, III and IV of this document comprise the Transport Canada Approved sections of this Flight Manual Supplement. Compliance with Section I, Limitations, is mandatory.

Section V and any subsequent sections if present are Unapproved and are provided for information only.

The information and data contained in this Flight Manual Supplement supersede or supplement that contained in the basic Approved Flight Manual for the Bell 206L Series when fitted with the Quick Release Cargo Basket or Quick Release Step Installation. For limitations, procedures and performance not listed in this Flight Manual Supplement, refer to the Approved Flight Manual and other approved Flight Manual Supplements.

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Ш	Emergency Procedures	3
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VI	Installation / removal instructions	6

Record of Revisions

Revision	Issue Date	Pages Revised	Date Inserted	Ву
0	05 May, 2006	None		
1	09 Nov, 2006	2, 6		
2	17 July, 2008	All		

I LIMITATIONS

- 1. The maximum load in the AERO Design Ltd. Quick Release Cargo Basket is 200 lb. (90.5 kg).
- Flight operations limited to VFR conditions with AERO Design Ltd. Cargo Basket installed.
- 3. Quick Release Step may be installed when the basket is removed.

II NORMAL PROCEDURES

- 1. Pre-flight inspections:
 - Ensure that all cargo stored in the cargo basket does not extend outside the basket, is properly tied down and secured for flight.
 - b) Ensure that the lid of cargo basket is closed and secured.
 - c) Ensure the basket is locked in postion on the beams. Pull up on the forward and aft end of the basket to check.
 - d) Ensure the step is locked in position on the beams. Pull up on the forward and aft end of the step to check.

CAUTION

It is possible to exceed the lateral centre of gravity limits of the rotorcraft under some loading conditions. Pilots must ensure that lateral C of G is within limits when loading the basket.

III EMERGENCY PROCEDURES

No change from basic Approved Flight Manual.

CAUTION:

The rotorcraft glide angle is steeper than that of the basic helicopter when the AERO Design Ltd. Cargo Basket is installed.

IV PERFORMANCE

Climb performance may be reduced by up to 350 fpm with the basket installed.

Cruise speeds are reduced by approximately 10 mph with the basket installed.

Revision 2 17 July, 2008 Page 3
TRANSPORT CANADA APPROVED

V WEIGHT AND BALANCE

1. The following weight and balance is for the low mounted quick release cargo basket configuration, installed in accordance with drawing 70201.

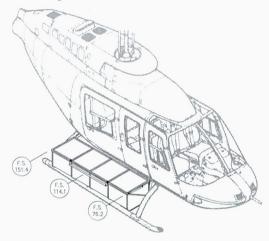


Figure 1 – Low Mounted Quick Release Cargo Basket Configuration

Low Mounted Quick Release Cargo Basket Configuration

Item	Weight	Longitudinal		Lateral	
	Worgin	Arm	Moment	Arm	Moment
Basket	45.0 lb	114.1 in	5134 in*lb	38.5 in	1733 in*lb
Only ¹	20.4 kg	2898 mm	59 122 mm*kg	978 mm	19 949 mm*kg
Cargo ²	200 lb	114.1 in	22 820 in*lb	38.5 in	7700 in*lb
(MAX)	90.9 kg	2898 mm	263 467 mm*kg	978 mm	88 900 mm*kg

¹ Weight and balance is for Cargo Basket only. Mounting beams and attachment provisions are not included since they should have been included in the basic rotorcraft weight and balance at time of initial installation.

CAUTION:

It is possible to exceed lateral CG limits in some configurations.

² Longitudinal and Lateral moment arms are given only for the center of the Cargo Basket. Due to the length of the basket, some loading arrangements may require that actual moment arms be measured, to determine the correct moments about the center of gravity.

2. The following weight and balance is for the quick release step configuration, installed in accordance with drawing 80002.

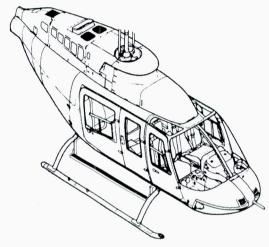


Figure 2 – Low Mounted Quick Release Cargo Basket Configuration

Low Mounted Quick Release Step Configuration

Item	Weight	Longitudinal		Lateral	
	VVoigit	Arm	Moment	Arm	Moment
Step	8.2 lb	114.1 in	935.6 in*lb	29.3 in	239.9 in*lb
Only ¹	3.7 kg	2898 mm	10 723 mm*kg	744 mm	2 754 mm*kg

Low Mounted Quick Release Step Configuration (Stowed Position)

Item	Weight	Longitudinal			Lateral	
	rroigin	Arm	Moment	Arm	Moment	
Step	8.2 lb	114.1 in	935.6 in*lb	23.7 in	194.3 in*lb	
Only ¹	3.7 kg	2898 mm	10 723 mm*kg	602 mm	2 227 mm*kg	

¹ Weight and balance is for Step only. Mounting beams and attachment provisions are not included since they should have been included in the basic rotorcraft weight and balance at time of initial installation.

VI INSTALLATION / REMOVAL INSTRUCTIONS

The Quick Release Mounting Provisions are installed in accordance with drawing 70202. The Quick Release Basket is installed in accordance with drawing 70201. The Quick Release Step is installed in accordance with drawing 80002. Removal of the basket or step leaving the beams in place is an approved configuration for flight. Logbook entry indicating installation or removal of basket or step and which weight and balance amendment is in effect is required.

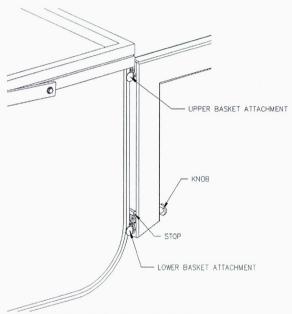


Figure 3 - Basket Attachment

- 1. Installation Refer to Figure 3.
 - 1. Set basket upper attachment into slot on forward and aft beams.
 - At forward end of basket, lift until lower attachment fitting hits stop over keyway. Push fitting into keyway and slide basket down until locked. Repeat for aft end.
- 2. Removal Refer to Figure 3.
 - Pull knob at bottom end of forward beam and lift basket until lower attachment fitting is free of keyway. Keep upper basket attachment in slot in beam. Repeat for aft end.
 - 2. Lift basket until upper attachments are out of slots on beams and remove basket from helicopter.

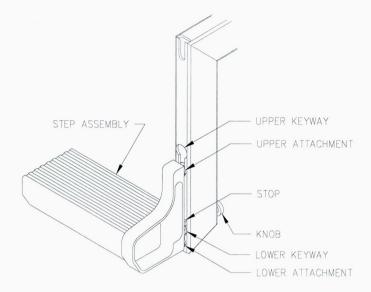


Figure 4 - Step Attachment

- 3. Step Installation Refer to Figure 4.
 - 1. Set upper attachment into upper keyway on forward and aft beams.
 - 2. Lift step until lower attachment hits stop over keyway. Push fitting into keyway and slid down until locked.
- 4. Step Removal Refer to Figure 4.
 - 1. Pull knob at bottom end of forward beam and lift step until the lower attachment fitting is free of keyway. Keep upper attachment in keyway in beam. Repeat for aft end.
 - 2. Lift step until upper attachments are out of keyways in beams and remove from helicopter.

AERO Design Ltd. ICA 800.90

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA 800.90

QUICK RELEASE STEP

Preface

These Instructions for Continued Airworthiness shall be included in the rotorcraft Maintenance Manual when the Quick Release Step assembled in accordance with AERO Design Ltd. Document Control List DCL800-11, Revision 0, or later approved revision, is installed.

The information contained herein supplements the information in the basic Maintenance Manual. For Maintenance practices and procedures not contained in these Instructions for Continued Airworthiness refer to the basic Maintenance Manual and its approved supplements.

Revision 2 Date: 2 December, 2008

<u>AERO Design Ltd.</u> Engineering Consultants 2013 – 39th Avenue N.E., Calgary, Alberta T2E 6R7

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RECORD OF REVISIONS

Revision Number	Issue Date	Date Inserted	Ву
0	17 July 2008		Original Issue
1	18 November 2008		
2	2 December 2008		

LIST OF EFFECTIVE PAGES

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- 1	121	\cap t	Re	VIS	ions	2

Revision 0 (Original Issue)

17 July, 2008

Revision 1

18 November, 2008

Revision 2

2 December, 2008

List of Effective Pages

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CHAPTER 0 – INTRODUCTION

0-1 SCOPE

The following Instructions for Continued Airworthiness (ICA) satisfy the requirements of 14 CFR 27/29.1529, and provide the information necessary to complete the on-going maintenance and inspections required for rotorcraft embodying the Quick Release Step as described herein.

0-2 DEFINITIONS AND ABBREVIATIONS

ICA - Instructions for Continued Airworthiness

LH - Left Hand

RH - Right Hand

0-3 DISTRIBUTION

Copies of this ICA and amendments shall be distributed to all known purchasers of the Quick Release Step. Requests for a copy may be made in writing to:

AERO Design Ltd. 2013 39th Avenue N.E. Calgary, Alberta T2E 6R7

Fax: 403-250-8333

Email: info@aerodesign.ca

Any changes will be sent to Transport Canada. All changes will be recorded in the Record of Revisions page at the front of this document.

0-4 COMPATIBILITY

Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the helicopter.

Revision 2 **00-00-00** Page 4

0-5 GENERAL DESCRIPTION

The Quick Release Step installation consists of a step assembly which is attached to quick release mounting provisions installed on the helicopter. These mounting provisions are capable of mounting various equipment including cargo baskets.

The step itself consists of an aluminum extrusion attached to brackets on the ends with fittings that lock into the quick release mechanism.

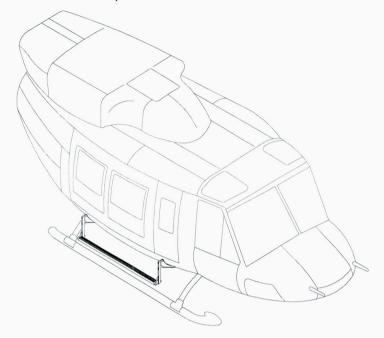


Figure 2a – Bell Medium Step Installation

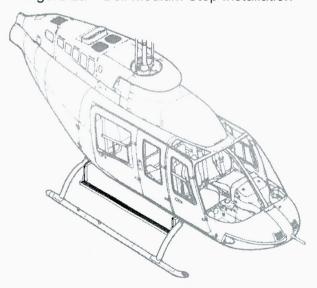


Figure 2b – Bell 206L / 407 Step Installation

CHAPTER 4 - AIRWORTHINESS LIMITATIONS

Transport Canada

The Airworthiness Limitations section is Transport Canada-approved and specifies maintenance required under Section 571 of the Canadian Aviation Regulations, unless an alternative program has been approved.

FAA

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

No additional airworthiness limitations have been imposed due to installation of the Quick Release Step.

Revision 1 **04-00-00** Page 6

CHAPTER 5 – INSPECTION REQUIREMENTS

5-1 INSPECTION SCHEDULE

Continued airworthiness is contingent upon compliance with the following inspection items. These items shall be completed in conjunction with the rotorcraft Maintenance Inspection schedule, or other approved program, or upon removal and replacement of any component of Quick Release Step.

Daily Inspection

- 1. Inspection Area: Step
 - a) Inspect the step attachment to the beams for condition and security. Ensure quick release mechanism is completely extended, flush with the outboard surface of the beam.

300 Hour or Annual Inspection

Refer to the ICA for the Quick Release Cargo Basket for each specific model of helicopter for inspection of mounting provisions.

- 1. Inspection Area: Step
 - a) Visually inspect welds attaching end brackets to step extrusion for cracks, corrosion or other damage.
 - b) Visually inspect step for damage.
 - c) Visually inspect lugs attaching the step to the beams for security and damage.

Special Inspections

Following a hard landing inspect the Quick Release Step installation in accordance with the 300 hour or annual inspection listed above.

Revision 2 **05-00-00** Page 7

5-2 DAMAGE LIMITS / REPAIR INSTRUCTIONS

Refer to the ICA for the Quick Release Cargo Basket for each specific model of helicopter for further limits and repair instructions.

If damage is found in the inspections above, repair in accordance with the instructions below.

1. Step Assembly

Part	Type of Damage	Max. Allowable	Repair
Step End Bracket	Corrosion	0.010" deep	Blend up to 0.010" deep with scotchbrite.
	Scratches / Nicks	0.010" deep x 0.5" long	Blend up to 0.010" deep with scotchbrite.
	Cracks/Dents	None	N/A
	Bent Lugs	None	N/A
Centre Step	Corrosion	2" x 2" x 0.010" deep	Blend up to 0.010" deep with scotchbrite.
Section	Scratches / Nicks	0.010" deep x 1" long	Blend up to 0.010" deep with scotchbrite.
	Cracks / Dents	None	N/A
	Permanent	0.25" max at middle of	None
	Deflection of Step	step	

2. Steel Beams

Part	Type of Damage	Max. Allowable	Repair
Steel Beam	Corrosion	0.030" deep	Blend up to 0.030" deep with scotchbrite.
	Scratches / Nicks (Outboard face)	0.030" deep x 0.125" wide	Blend up to 0.030" deep with scotchbrite.
	Scratches / Nicks (all other sides)	0.060" deep x 0.125" wide	Blend up to 0.060" deep with scotchbrite.
	Cracks/Dents	None	N/A
	Elongation of Keyway	See figure 3	None
	Widening of slots	27/64" (0.422) diameter (check with a 27/64" drill)	None



Figure 3 – Critical Keyway dimensions (Bell Medium beam shown, Bell 206L/407 critical keyway same)

3. Step Welds

Cracks up to 0.25" long may be repaired as follows:

- a) Clean area of paint.
- b) Grind away weld in area of crack.
- c) T.I.G. weld per MIL-STD-2219 Class "C" using ER4043 filler rod. Do not grind flush.
- d) Touch up paint as noted in section 5-3.

5-3 PROTECTIVE TREATMENT INFORMATION

1. Step Assembly

The Step Assembly is supplied powder coated white. If the powder coat is damaged, touch up with white polyurethane paint. The tread area is painted with anti-skid paint. If the anti-skid paint is damaged, touch up with Randolph X1567 Wingwalk grip paint or equivalent.

Revision 2 **05-00-00** Page 9

CHAPTER 25 – EQUIPMENT AND FURNISHINGS

The Quick Release Step Installation may be applied to the right and/or left side of the helicopter. A stowed position located on the inboard side of the mounting provisions is provided on some configurations. Refer to the ICA for the Quick Release Cargo Basket for each specific model of helicopter for installation and removal instructions for the mounting provisions.

25-1 STEP INSTALLATION

Refer to Figure 4.

- 1. Set upper attachment into upper keyway in forward and aft beams.
- 2. Lift step until lower attachment fitting hits stop. Push fitting into keyway and slide step down until locked.

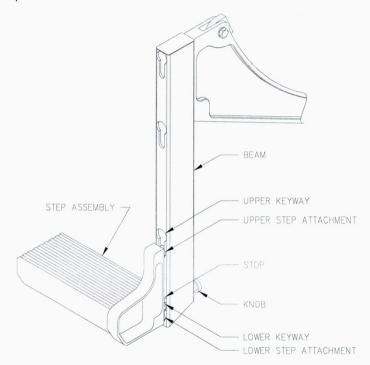


Figure 4 – Step Attachment

(Bell Medium Attachment shown, Bell 206L/407 attachments same)

25-2 STEP REMOVAL

Refer to Figure 4.

- 1. Pull knob at bottom end of forward beam and lift step until lower attachment fitting is free of keyway. Keep upper attachment in keyway on beam.
- 2. Pull knob at bottom end of aft beam and lift step until lower attachment fitting is free of keyway. Keep upper attachment in keyway on beam.
- 3. Lift step until upper attachments are out of keyways on both beams and remove from helicopter.

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25-3 WEIGHT AND BALANCE

Different weight and balance configurations are required for the pilot as the step may be removed/installed in the field by the pilot. The first is the installation of Provisions only. The second is Provisions and Step. The third is Provisions and Step in the stowed position.

Bell 205A-1 / 212 / 412 Series

Configuration 1 – Provisions Only			Longitudinal		Lateral	
		Weight	Arm	Moment	Arm	Moment
Part #	Name	(lbs)	(in)	(in-lbs)	(in)	(in-lbs)
75115-01	Forward Beam Assembly	5.0	84.5	422.5	46.0	230.0
75116-01	Aft Beam Assembly	4.6	155.1	713.5	47.3	217.6
75102-01	Provisions Installation (Total)	9.6	118.3	1136.0	46.6	447.6

Configuration 2 – Step and Provisions			Longitudinal		Lateral	
		Weight	Arm	Moment	Arm	Moment
Part #	Name	(lbs)	(in)	(in-lbs)	(in)	(in-lbs)
75102-01	Provisions Installation	9.6	118.3	1136.0	46.6	447.6
80010-7100	Step	7.8	119.8	934.4	52.2	407.1
80001-01	Step Installation (Total)	17.4	119.0	2070.4	49.1	854.7

Configuration 3 – Step and Provisions			Longitudinal		Lateral	
(Stowed)		Weight	Arm	Moment	Arm	Moment
Part #	Name	(lbs)	(in)	(in-lbs)	(in)	(in-lbs)
75102-01	Provisions Installation	9.6	118.3	1136.0	46.6	447.6
80010-7100	Step	7.8	119.8	934.4	46.6	363.5
80001-01	Step Installation (Total)	17.4	119.0	2070.4	46.6	811.1

Note: Lateral arms are given for right side installation. For installation on left side, lateral arms are negative.

Bell 206L Series / 407

Configuration 1 – Provisions Only			Longitudinal		Lateral	
		Weight	Arm	Moment	Arm	Moment
Part #	Name	(lbs)	(in)	(in-lbs)	(in)	(in-lbs)
70102-01	Provisions Installation (407)					
70202-01	Provisions Installation (206L)	19.9	113.3	2255.3	11.7	233.6

Configuration 2 – Step and Provisions			Longitudinal		Lateral	
		Weight	Arm	Moment	Arm	Moment
Part #	Name	(lbs)	(in)	(in-lbs)	(in)	(in-lbs)
	Provisions Installation	19.9	113.3	2255.3	11.7	233.6
80010-7475	Step	8.2	114.1	935.6	29.3	239.9
80001-01	Step Installation (Total)	28.1	113.6	3190.9	16.9	473.5

Configuration 3 – Step and Provisions			Longitudinal		Lateral	
(Stowed)		Weight	Arm	Moment	Arm	Moment
Part #	Name	(lbs)	(in)	(in-lbs)	(in)	(in-lbs)
	Provisions Installation	19.9	113.3	2255.3	11.7	233.6
80010-7475	Step	8.2	114.1	935.6	23.7	194.3
80001-01	Step Installation (Total)	28.1	113.6	3190.9	15.2	427.9

25-4 STRUCTURAL FASTENER DATA

Refer to Standard Practices Manual for torque values not listed in this ICA.

Revision 2 **25-50-00** Page 12

AERO Design Ltd.

ENGINEERING REPORT ER800.02

QUICK RELEASE STEP INSTALLATION

Bell 206L Series, 407

Approved: E. Burgoin, P. Eng.

Prepared by: Jeff Clarke

Revision 0
Date: 12 November, 2008

<u>AERO Design Ltd.</u> Engineering Consultants $2013 - 39^{th}$ Avenue N.E., Calgary, Alberta T2E 6R7

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AERO Design Ltd. ER800.02

1.0 INTRODUCTION

When the quick release cargo basket is removed from the helicopter, it is desirable to install a flight step to aid ingress and egress from the cabin without removing the basket provisions. This installation uses the existing mounting beams for the cargo baskets and uses the same locking mechanism to retain the step in place.

2.0 REFERENCE

AERO Design Ltd. Drawings 80002 MIL-HDBK-5J

3.0 BASIS OF CERTIFICATION

Bell 407, TCDS H-92 (Highest of Bell 206L Series and 407):

FAR part 27, dated October 2, 1964 Amendment 27-1 through 27-30; Paragraph 27.561(b)(3) at Amdt 27-24; Section 27.563 at Amdt. 27-25; Section 27.785 at Amdt 27-24; Section 27.1093 at amendment 27-8; and Section 27.173 and 27.175 at amendment 27-1.

Exemptions to FAR 27 are the deletion of sections: 27.562, 27.1195, and 27.952(b)(1).

This installation:

Same as the basis of certification for each model as shown above.

4.0 ANALYSIS OF CURRENT AIRWORTHINESS DIRECTIVES (AD'S)

This installation does not impact on any current ADs.

5.0 LOADS

5.1 Inertia Loads

$$W_{\text{step}} = 8.5 \text{ lbs}$$

Weight of step

$$n_{\text{man_pos}} = 3.5$$

Limit positive maneuvering load factor (Ref: FAR 27.337)

$$n_{sf} = 1.5$$

Safety Factor (Ref: FAR 27.303)

$$n_{ult_man_pos} = n_{man_pos} \times n_{sf}$$

$$n_{ult\ man\ pos} = 3.5 \times 1.5 = 5.25$$

Ultimate positive maneuvering load factor

$$P_{ult\ man\ pos} = W_{step} \times n_{ult\ man\ pos}$$

$$P_{ult\ man\ pos} = 44.6 lbs$$

Ultimate positive maneuvering load

The quick release step is not intended to be used in flight. As such, there is no requirement for the application of maneuvering inertia loads due to a person on the step. However, the step is checked for ultimate inertia load applied by two people to allow for the possibility of use during rappel or similar operations.

$$W_{person} = 170 lbs$$

Weight of person

$$P_{ult\ man\ pos} = W_{person} \times 2 \times n_{ult\ man\ pos}$$

$$P_{ult\ man\ pos} = 1785\ lbs$$

Ultimate positive maneuvering load applied to step by 2

people

5.2 Aerodynamic Load

Drag

$$A_{f} := 10.2 \cdot in^{2}$$

Frontal Area of Step

Never Exceed Speed of AS350/AS355/EC135

$$V_d := \frac{V_{ne}}{0.9}$$

Design Dive Speed

$$\rho := 0.002378 \cdot \frac{\text{slug}}{\text{ft}^3}$$

Air Density at Sea Level

AERO Design Ltd. ER800.02

$$C_{Do} := 2.0$$

Coefficient of Drag (conservative)

$$P_{drag} := \frac{\rho}{2} \cdot V_{d}^{2} \cdot A_{f}^{C}_{Do}$$

Limit drag at V_d

$$n_{sf} := 1.5$$

Factor of Safety

$$P_{drag_ult} := P_{drag} \cdot n_{sf}$$

Ultimate drag at Va

Lift

$$A_{1ift} := 3.4 \cdot in \cdot 73.75 \cdot in$$

$$A_{1ift} = 250.7 \cdot in^2$$

Planar area of step (largest)

Coefficient of lift for round tubes relative to airflow varies from near 0 at 0°, to 0.4 at about 60°.

$$C_T := 0.4$$

Coefficient of lift (Max. for a round tube, ~60° to air flow) (ref: Hoerner, Fig. 18)

$$P_{lift} := C_L \cdot \frac{\rho}{2} \cdot V_d^2 \cdot A_{lift}$$

Limit lift on step at Va

$$P_{lift_ult} = 104.8 \cdot 1bf$$

Ultimate lift on step at V_d

6.0 STRUCTURAL COMPLIANCE

The aerodynamic drag load is very small and by inspection can be carried by the step assembly and its attachments.

The aerodynamic lift generated by the step is applied similar to the down load tested below, only upward. The downward test is sufficient to demonstrate the lift load.

A Quick Release Step Assembly was fabricated to fit a Bell Medium (71.00 inches centre to centre on the lugs). The down tubes with keyways (75132-01) were bolted to lugs welded to a large I beam, using the bottom hole to simulate the actual attachment.

The step was loaded with 1800 lbs of lead shot (72 bags @ 25 lbs), evenly distributed over the surface of the step. It was checked for deflection before, during, and after the test.

AERO Design Ltd. ER800.02

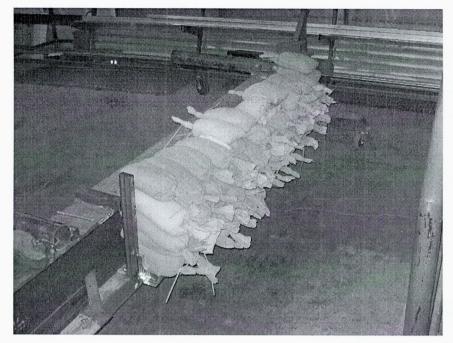


Figure 1 – Ultimate Maneuvering Load on Step Assembly

(Bell Medium Step Assembly)

At ultimate load there was almost 2 inches of deflection. With the load removed there was no permanent deformation found. The Bell 206L/407 Step is 3.75" longer than the Bell Medium Step tested. Since there was no permanent deformation at ultimate load, the slight increase in length will not result in failure at ultimate load.

The beams and helicopter attachments have been demonstrated to sustain no permanent deformation at 600 lbs limit maneuvering load, and no failure at 925 lbs ultimate maneuvering load per beam. Refer to TR698.02. The applied loads from this installation are within the loads tested for the beams and attachments. The installation is acceptable for installation on Bell 206L Series and 407 helicopters.

7.0 COMPLIANCE WITH 27.251 AND 27.629

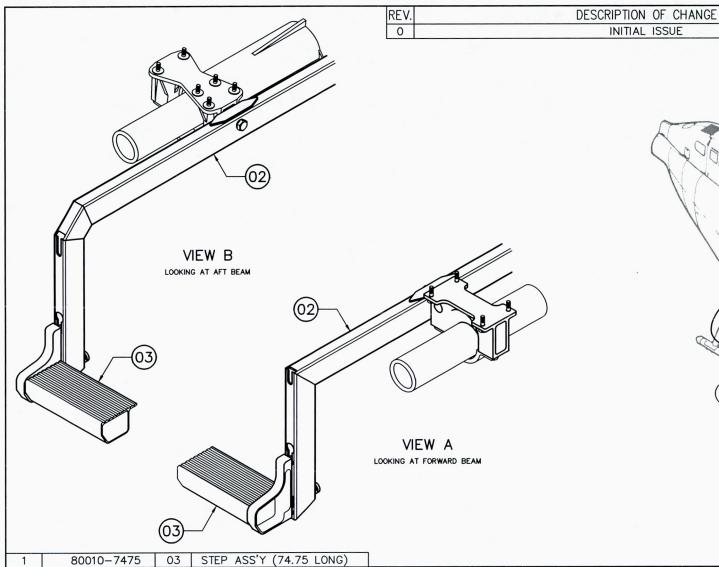
The frontal and planar area of the step is significantly smaller than the area of the cargo basket which uses the same mounting provisions. The step section is a closed section so it is torsionally rigid and will not allow flexing between the attachments. The conclusion that can be drawn from these properties is that the aerodynamic loading or turbulence shedding from the step will be significantly less than from the basket, and are expected to be similar to the basic unmodified helicopter.

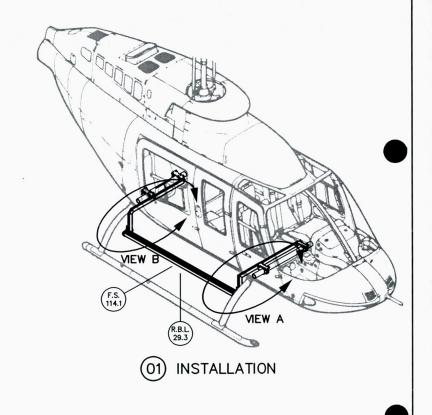
The effects of vibration (27.251) and flutter (27.629) have been considered over the flight regime of the helicopter, and there is no effect.

Revision 0 12 November, 2008

CONFORMITY INSPECTION RECORD

Applicant	Aeronautical Pro	Title of Change				
AERO Design Ltd.	Make	Model		Serial No.	Registration	Quick Release Step
	Bell	206L Series, 407		N/A	N/A	
Drawing No.	Applicar Signature	nt's Inspector Date	Signature	T.C. Inspection	Date	Findings
Step						
80010 (Assembly)	Mr. Clarke.	Jan 28/09				
80020 (End Fab.)	If Clake.	Jan 28/09				
	011					
	APPLICAN	T'S ATTESTATION				TC INSPECTION
ereby confirm that the	e prototype installation	on for the subject]	☐ ACCEPTABI	LE
MODIFICATION,				[UNACCEPT.	ABLE
REPAIR,						
TSO/AP-TC ARTICL	E					
n conformity with the d that necessary groue ease check () the approximation	applicable installation ind tests have been oplicable box.]	on drawing(s) listed abo carried out.	ve			
ditional Information:	1			<u> </u>	Remarks:	
Signature:	Il Clake.				Signature:	





INITIALS

BJC

DATE

JULY 15/08

1	80010-7475	03	STEP ASS'Y (74.75 LONG)			
1	70202-01	02	PROVISIONS INST'N (206L)			
1	70102-01	02	PROVISIONS INST'N (407)			
	80002-01	01	INSTALLATION			
01	PART NO.	ITEM	DESCRIPTION			
QTY.	LIST OF MATERIALS					
			NOTICE			

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APPROVALS	DATE			
DRAWN: JEFF CLARKE	15 JULY 2008			
CHECKED: E. BURGOIN				

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ANGLES DECIMALS ±1/2° $X.XXX \pm 0.010$ $x.xx \pm 0.03$ ± 0.1

X.X

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> BELL 206L SERIES & 407 QUICK RELEASE STEP STEP INSTALLATION

DWG. SIZE DWG. NO. NOT TO SCALE SHEET 1 OF 2

INITIAL ISSUE

80002

REV.

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE	BJC	JULY 15/08

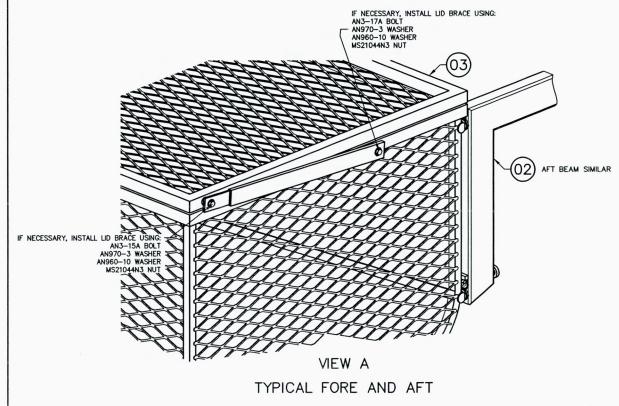
NOTES:

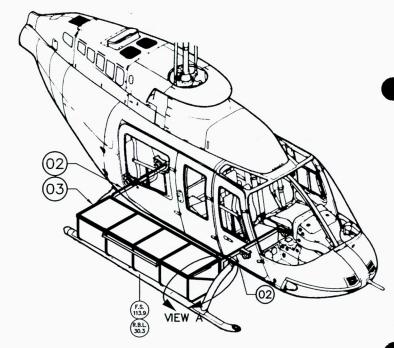
- 1. QUICK RELEASE MOUNTING PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 70102 (BELL 407) OR 70202 (BELL 206L SERIES) IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 2. HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 3. REFER TO FLIGHT MANUAL SUPPLEMENT FMS701.90 (BELL 407) OR FMS702.90 (BELL 206L SERIES) FOR LIMITATIONS WITH THE QUICK RELEASE STEP INSTALLED.
- 4. REFER TO INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA800.90 FOR MAINTENANCE INFORMATION.

	WEIGHT	AND	BALANC	E		
ЕМ	DESCRIPTION	WEIGHT (LB)	LONGIT ARM (IN)	UDINAL MOMENT (LB-IN)	LATI ARM (IN)	ERAL MOMENT (LB-IN)
02	MOUNTING PROVISIONS INSTALLATION	19.9	113.3	2255.3	11.7	233.6
03	STEP ASSEMBLY (74.75 LONG)	8.2	114.1	935.6	29.3	239.9
01	STEP INSTALLATION	28.1	113.6	3190.9	16.9	473.5
	02	DESCRIPTION DESCRIPTION	WEIGHT (LB) DESCRIPTION (LB)	LONGIT ARM (LB) (IN) DESCRIPTION (LB) (IN) DO MOUNTING PROVISIONS INSTALLATION 19.9 113.3 DO STEP ASSEMBLY (74.75 LONG) 8.2 114.1	LONGITUDINAL ARM MOMENT (LB) (IN) (LB-IN) DESCRIPTION (LB) (13.3 2255.3 STEP ASSEMBLY (74.75 LONG) 8.2 114.1 935.6	LONGITUDINAL LATE

APPROVALS DRAWN: JEFF CLARKE CHECKED: E. BURGOIN	DATE 15 JULY 2008	AERO DESIGN LTD. CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M 2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net				
UNLESS OTHERWISE DIMENSIONS ARE IN TOLERANCES DECIMALS	N INCHES.	BELL 206L SERIES & 407 QUICK RELEASE STEP STEP INSTALLATION				
x.xxx ±0.010 x.xx ±0.03 x.x ±0.1	±1/2°	NOT TO SCALE DWG. SIZE DWG. NO. $A4 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$				

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE	BJC	APR 17/06
1	UPPER BEAM ATTACHMENT CHANGED	BJC	NOV 09/06
2	ADD ELIGIBLE BEAM ASSEMBLIES	BJC	JUNE 29/07
3	DRAWING RESIZED, PROVISIONS MOVED TO DRAWING 70102	BJC	JULY 15/08
	REV. 0 1 2 3	0 INITIAL ISSUE 1 UPPER BEAM ATTACHMENT CHANGED 2 ADD ELIGIBLE BEAM ASSEMBLIES	0 INITIAL ISSUE BJC 1 UPPER BEAM ATTACHMENT CHANGED BJC 2 ADD ELIGIBLE BEAM ASSEMBLIES BJC





1	69810-01	03	CARGO BASKET ASSEMBLY	APPROVALS	DATE
1	70202-01	02	PROVISIONS INSTALLATION		DATE
	70201-01	01	INSTALLATION	DRAWN: JEFF CLARKE	17 APR 2006
01	PART NO.	ITEM	DESCRIPTION	CHECKED: E. BURGOIN	
QTY.		LIST C	E. BURGUIN		
		T	NOTICE	UNLESS OTHERWISE	SPECIFIED
THIS DRAWING CONTAINS INFORMATION AND DATA WHICH				DIMENSIONS ARE IN	N INCHES.
OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER, NOR USED FOR			ROPRIETARY TO AERO DESIGN LTD. THIS DRAWING, NY PORTION THEREOF, MAY NOT BE REPRODUCED.	TOLERANCES	ON:
			DECIMALS	ANGLES	

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INSTALLATION

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BELL 206L SERIES QUICK RELEASE CARGO BASKET INSTALLATION

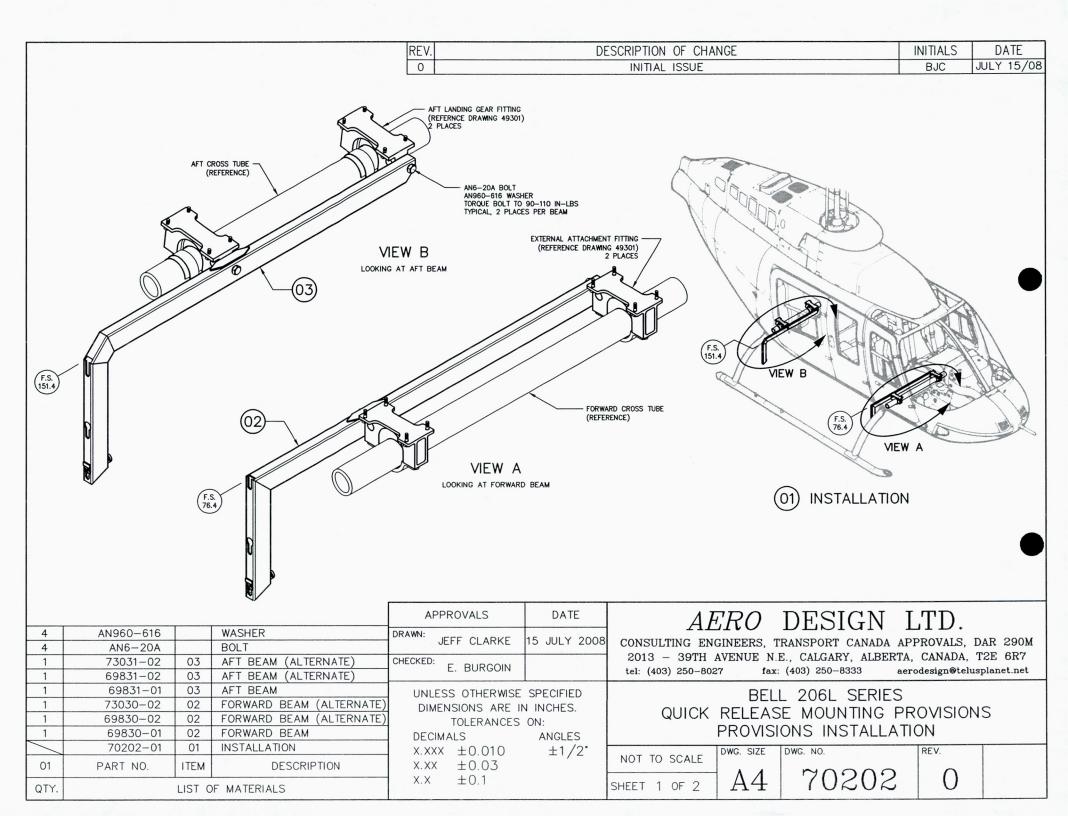
NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.	
SHEET 1 OF 2	A4	70201	3	

NOTES:

- 1. EXTERNAL ATTACHMENT PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 49301 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION. QUICK RELEASE MOUNTING PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 70202 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 2. HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 3. SEE FLIGHT MANUAL SUPPLEMENT, FMS702.90, FOR LIMITATIONS ON HELICOPTER OPERATIONS WITH CARGO BASKET INSTALLED.
- 4. SEE INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, ICA698.90, FOR MAINTENANCE INFORMATION.
- 5. BEAMS (73030-01 AND 73031-01) ARE USED FOR INSTALLATION OF EQUIPMENT ON BOTH LEFT AND RIGHT SIDES. PROVISIONS FOR INSTALLING THE QUICK RELEASE CARGO BASKET (69810-01) ON THE RIGHT SIDE IS PROVIDED.

	WEIGHT	AND	BALANC	CE		
ITEM	DESCRIPTION	WEIGHT (LB)	LONGI [*] ARM (IN)	TUDINAL MOMENT (LB-IN)	LAT ARM (IN)	TERAL MOMENT (LB-IN)
01	CARGO BASKET INSTALLATION (CARGO BASKET AND MOUNTING PR	64.9 OVISIONS)	113.9	7390	30.3	1966
	CARGO	200 MAX	114.1	22820	38.5	7700

	APPROVALS	DATE	AF	RO	DESIGN I	TD.		
1	DRAWN: JEFF CLARKE	17 APR 2006	CONSULTING EN	GINEERS, T	RANSPORT CANADA AP	PROVALS, D.		
-	CHECKED: E. BURGOIN	2)	2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telu					
	UNLESS OTHERWISE DIMENSIONS ARE IN TOLERANCES DECIMALS	QUI	CK REL	L 206L SERIES EASE CARGO BA NSTALLATION	ASKET			
	x.xxx ±0.010 x.xx ±0.03	±1/2°	NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.		
	x.xx ±0.03 x.x ±0.1		SHEET 2 OF 2	A4	70201	3		



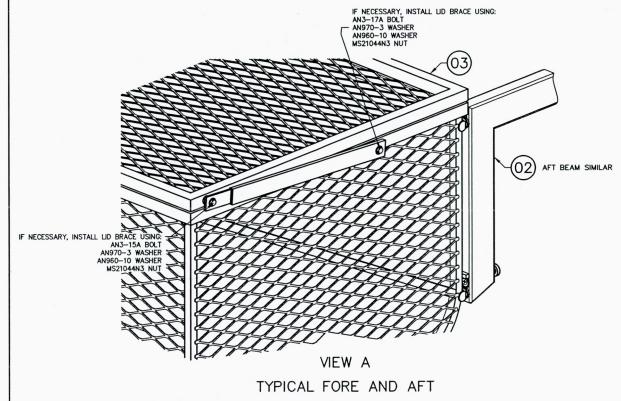
NOTES:

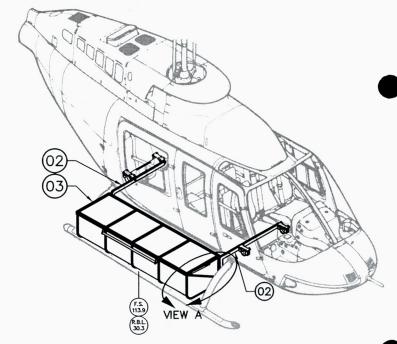
- 1. EXTERNAL ATTACHMENT PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 49301 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 2. HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 3. BEAMS (73030-01 AND 73031-01) ARE USED FOR INSTALLATION OF EQUIPMENT ON BOTH LEFT AND RIGHT SIDES. PROVISIONS FOR INSTALLING THE QUICK RELEASE CARGO BASKET (69810-01) ON THE RIGHT SIDE IS PROVIDED.

	WEIGHT	AND	BALANC	E		
ITEM	DESCRIPTION	WEIGHT (LB)	LONGIT ARM (IN)	UDINAL MOMENT (LB-IN)	LATI ARM (IN)	ERAL MOMENT (LB-IN)
02	FORWARD BEAM	10.1	76.4	771.6	10.9	110.1
03	AFT BEAM	9.8	151.4	1483.7	12.6	123.5
01	MOUNTING PROVISIONS INSTALLATION	19.9	113.3	2255.3	11.7	233.6

THIS DRAIS PROPOR ANY COPIED, MANUFA AERO DE REFEREI DESIGN ITHIS DRA	APPROVALS	DATE	AERO DESIGN LTD.				
DRAWING ROPRIETAL NAY PORT ED, OR DL UFACTURI O DESIGN ERENCE, CN LTD. H DRAWING	DRAWN: JEFF CLARKE	15 JULY 2008	Combolling Brandblid, Handel our Charlest in 1 100 ville, 2111				
CONTAINS CONTAINS RY TO AEF ION THERE ION THERE ION THEO IPLICATED ING WITHO LTD. BY THE RECIF IARMLESS IARMLESS	CHECKED: E. BURGOIN		2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net				
NOTICE — INFORMATION INFORMATION 20 DESIGN LTD. 20 CF, MAY NATH MANNER IN THE WRITH ACCEPTING THAT ACREES FROM THE USE FORMATION CONTINUED TO THE WRITH ACCEPTING THAT ACREES FROM THE USE FORMATION CONTINUED TO THE WRITH ACCEPTING THAT ACREES FROM THE USE FORMATION CONTINUED TO THE WRITH ACCEPTING THAT ACREES FROM THE USE FORMATION CONTINUED TO THE WRITH ACCEPTING THAT ACCEPTING THE USE FORMATION CONTINUED TO THE WRITH ACCEPTING THAT ACCE	UNLESS OTHERWISE DIMENSIONS ARE II TOLERANCES DECIMALS	N INCHES.	BELL 206L SERIES QUICK RELEASE MOUNTING PROVISIONS PROVISIONS INSTALLATION				
AND DAT THIS D BE REPRO R, NOR U: EN CONS EN CONS IIS DRAW TO HOLE OR MIS	x.xxx ±0.010 x.xx ±0.03	±1/2°	NOT TO SCALE DWG. SIZE DWG. NO. REV.				
ATA WHICH DRAWING, PRODUCED, USED FOR USENT OF AURONG FOR ONLD AERO IISUSE, OF THEREON.	x.x ±0.1		SHEET 2 OF 2 A4 70202 0				

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	CREATED FROM 49201	BJC	APR 17/06
1	UPPER BEAM ATTACHMENT CHANGED	BJC	NOV 09/06
2	ADD ELIGIBLE BEAM ASSEMBLIES	BJC	JUNE 29/07
3	DRAWING RESIZED, PROVISIONS MOVED TO DRAWING 70102	BJC	JULY 15/08
	REV. 0 1 2 3	O CREATED FROM 49201 1 UPPER BEAM ATTACHMENT CHANGED 2 ADD ELIGIBLE BEAM ASSEMBLIES	O CREATED FROM 49201 BJC 1 UPPER BEAM ATTACHMENT CHANGED BJC 2 ADD ELIGIBLE BEAM ASSEMBLIES BJC





INSTALLATION

1	69810-01	03	CARGO BASKET ASSEMBLY	APPROVALS	DATE
1	70102-01	02	PROVISIONS INSTALLATION		
	70101-01	01	INSTALLATION	DRAWN: JEFF CLARKE	17 APR 2006
01	PART NO.	ITEM	DESCRIPTION	CHECKED: E. BURGOIN	
QTY.		LIST C	L. BONGOIN		
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±1/2° $X.XXX \pm 0.010$ ± 0.03 X.XX

 ± 0.1

X.X

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BELL 407 QUICK RELEASE CARGO BASKET INSTALLATION

DWG. SIZE DWG. NO. REV. NOT TO SCALE 70101 SHEET 1 OF 2

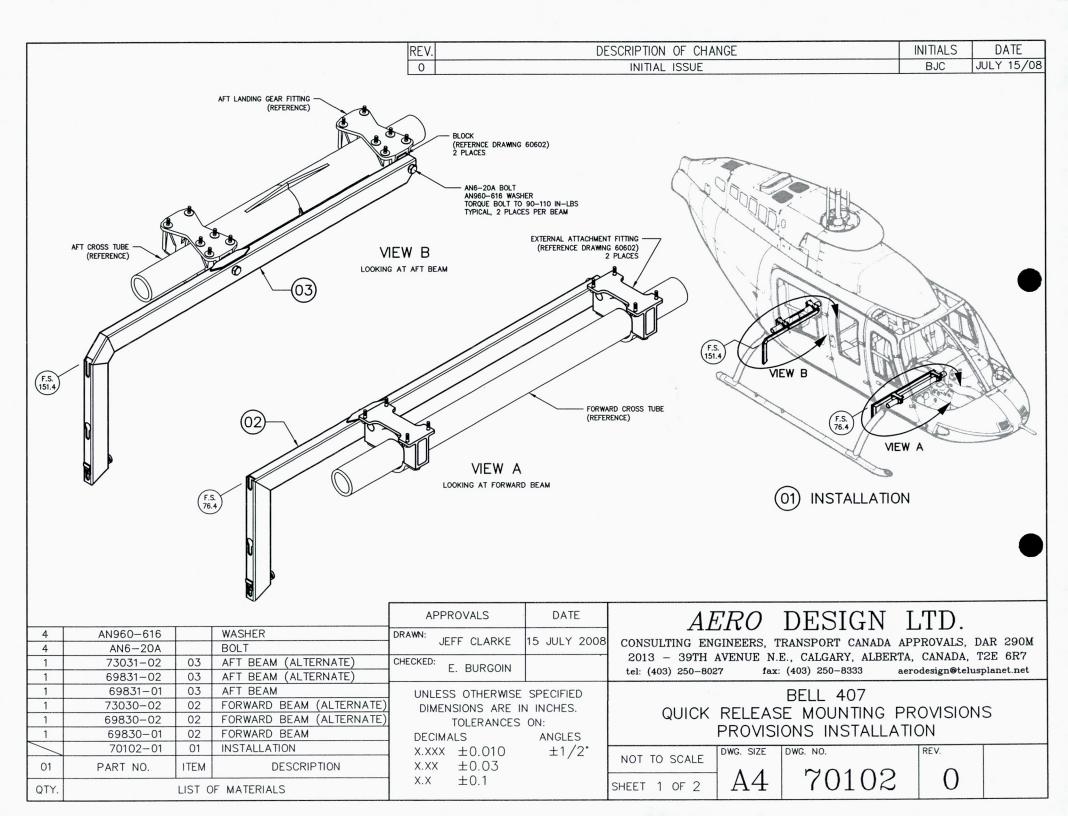
	REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
	0	CREATED FROM 49201	BJC	APR 17/06
	1	UPPER BEAM ATTACHMENT CHANGED	BJC	NOV 09/06
	2	ADD ELIGIBLE BEAM ASSEMBLIES	BJC	JUNE 29/07
	3	DRAWING RESIZED, PROVISIONS MOVED TO DRAWING 70102	BJC	JULY 15/08

NOTES:

- 1. EXTERNAL ATTACHMENT PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 60602 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION. QUICK RELEASE MOUNTING PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 70102 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 2. HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 3. SEE FLIGHT MANUAL SUPPLEMENT, FMS701.90, FOR LIMITATIONS ON HELICOPTER OPERATIONS WITH CARGO BASKET INSTALLED.
- 4. SEE INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, ICA698.90, FOR MAINTENANCE INFORMATION.
- 5. BEAMS (73030-01 AND 73031-01) ARE USED FOR INSTALLATION OF EQUIPMENT ON BOTH LEFT AND RIGHT SIDES. PROVISIONS FOR INSTALLING THE QUICK RELEASE CARGO BASKET (69810-01) ON THE RIGHT SIDE IS PROVIDED.

	WEIGHT	AND	BALANC	Œ		
ITEM	DESCRIPTION	WEIGHT (LB)	LONGIT ARM (IN)	TUDINAL MOMENT (LB—IN)	LAT ARM (IN)	TERAL MOMENT (LB-IN)
01	01 CARGO BASKET INSTALLATION (CARGO BASKET AND MOUNTING PRO		113.9	7390	30.3	1966
	CARGO	200 MAX	114.1	22820	38.5	7700

APPROVALS	DATE	AF	RO	DESIGN	LTD.	
DRAWN: JEFF CLARKE	17 APR 2006	COLIDODILLIA DI		RANSPORT CANADA		
CHECKED: E. BURGOIN		2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net				
UNLESS OTHERWISE DIMENSIONS ARE IT TOLERANCES DECIMALS	QU		BELL 407 EASE CARGO ISTALLATION	BASKET	7	
x.xxx ±0.010 x.xx ±0.03	±1/2°	NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.	
x.x ±0.1		SHEET 2 OF 2	A4	70101	3	



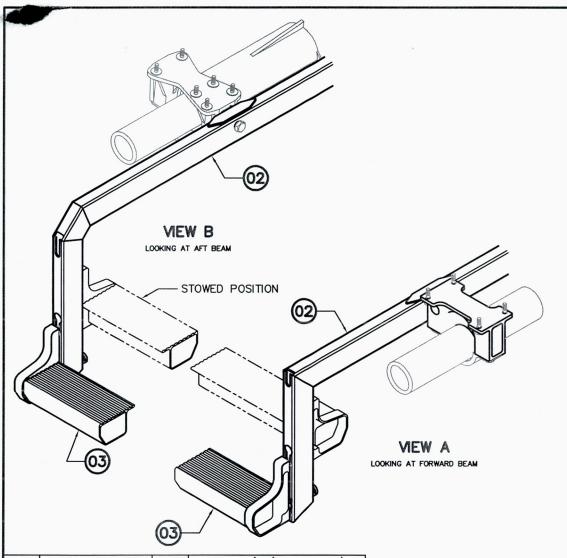
REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE	BJC	JULY 15/08

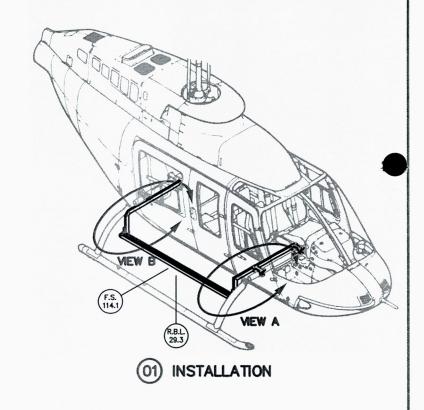
NOTES:

- 1. EXTERNAL ATTACHMENT PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 60602 IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 2. HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 3. BEAMS (73030-01 AND 73031-01) ARE USED FOR INSTALLATION OF EQUIPMENT ON BOTH LEFT AND RIGHT SIDES. PROVISIONS FOR INSTALLING THE QUICK RELEASE CARGO BASKET (69810-01) ON THE RIGHT SIDE IS PROVIDED.

	WEIGHT	AND	BALANG	CE		
ITEM	DESCRIPTION	WEIGHT (LB)	LONGI ARM (IN)	TUDINAL MOMENT (LB-IN)	LAT ARM (IN)	MOMENT (LB-IN)
02	FORWARD BEAM	10.1	76.4	771.6	10.9	110.1
03	AFT BEAM	9.8	151.4	1483.7	12.6	123.5
01	MOUNTING PROVISIONS INSTALLATION	19.9	113.3	2255.3	11.7	233.6

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RAMING DPRIETA DPRIETA IY PORT IY PORT IY PORT IY PORT IY FACTUR FACTUR FACTUR LESIGN RENCE, RAMING	DRAWN: JEFF CLARKE	15 JULY 2008					
CONTAI CONTAI RY TO /	CHECKED: E. BURGOIN		2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net				
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ND DAT THIS D THIS D E REPRO NOR U NOR U O CONS DRAW O HOLL OR MIS	x.xxx ±0.010 x.xx ±0.03	±1/2°	NOT TO SCALE DWG. SIZE DWG. NO. REV.				
A WHICH RAWING, ODUCED, ODUCED, SED FOR SENT OF ING FOR D AERO USE, OF THEREON.	x.x ±0.1		SHEET 2 OF 2 A4 70102 0				





1	80010-7475	03	STEP ASS'Y (74.75 LONG)			
1	70202-01	02	PROVISIONS INST'N (206L)			
1	70102-01	02	PROVISIONS INST'N (407)			
	80002-01	01	INSTALLATION			
01	PART NO.	ITEM	DESCRIPTION			
QTY.	LIST OF MATERIALS					
	NOTICE					

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	APPROVALS	DATE			
	DRAWN: JEFF CLARKE	15 JULY 2008			
-	CHECKED: E. BURGOIN				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:

DECIMALS

ANGLES $x.xxx \pm 0.010$ ±1/2°

 $x.xx \pm 0.03$ X.X ± 0.1

AERO DESIGN LTD.

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> BELL 206L SERIES & 407 QUICK RELEASE STEP STEP INSTALLATION

		SCALE	DWG. SIZE		REV.
SHEET	1	OF 2	A4	80002	0

R	REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
	0	INITIAL ISSUE	BJC	JULY 15/08

NOTES:

- 1. QUICK RELEASE MOUNTING PROVISIONS INSTALLED IN ACCORDANCE WITH DRAWING 70102 (BELL 407) OR 70202 (BELL 206L SERIES) IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 2. HIGH SKID GEAR INSTALLATION IS MANDATORY PREREQUISITE FOR THIS INSTALLATION.
- 3. REFER TO FLIGHT MANUAL SUPPLEMENT FMS701.90 (BELL 407) OR FMS702.90 (BELL 206L SERIES) FOR LIMITATIONS WITH THE QUICK RELEASE STEP INSTALLED.
- 4. REFER TO INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA800.90 FOR MAINTENANCE INFORMATION.

	WEIGHT	AND	BALANC	Œ		
ITEM	DESCRIPTION	WEIGHT (LB)	LONGI [*] ARM (IN)	TUDINAL MOMENT (LB-IN)	LAT ARM (IN)	ERAL MOMENT (LB-IN)
02 03	MOUNTING PROVISIONS INSTALLATION STEP ASSEMBLY	19.9 8.2	113.3 114.1	2255.3 935.6	11.7 29.3	233.6 239.9
01	STEP INSTALLATION	28.1	113.6	3190.9	16.9	473.5
02 03	MOUNTING PROVISIONS INSTALLATION STEP ASSEMBLY (STOWED)	19.9 8.2	113.3 114.1	2255.3 935.6	11.7 23.7	233.6 194.3
01	STEP INSTALLATION (STOWED)	28.1	113.6	3190.9	15.2	427.9

APPROVALS	DATE	AERO DESIGN LTD.							
DRAWN: JEFF CLARKE 15	5 JULY 2008	CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M							
CHECKED: E. BURGOIN		2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7 tel: (403) 250-8027 fax: (403) 250-8333 aerodesign@telusplanet.net							
	INCHES. N: ANGLES		QUICK	06L SERIES & 4 K RELEASE STEP P INSTALLATION					
x.xxx ±0.010 x.xx ±0.03	±1/2°	NOT TO SCALE	DWG. SIZE	DWG. NO.	REV.				
x.x ±0.03		SHEET 2 OF 2	A4	80002	0				

AERO DESIGN LTD. 2013 – 39 Avenue N.E., Calgary, Alberta, T2E 6R7

Tel: 403-250-8027 Fax: 403-250-8333 www.aerodesign.ca

03 December, 2008

Transport Canada Aircraft Certification Division 11th Floor, Canada Place 9700 Jasper Avenue Edmonton, Alberta T5J 4E6



Attn: Jack Staal

Your File : C-08-1002

Our File: 800-2

Re:

Bell 206L/407 Quick Release Step

Jack,

Please find attached the following documents related to this project:

Modification Approval Request Application Form	MOD800-2	Rev. 0
Compliance Program	CP800-2	Rev. 0
Project Summary	PS800-2	Rev. 0

Please extend my delegation to include the paragraphs noted on the attached compliance program.

Regards,

E. Burgoin, P.Eng, DAR 290M

Encl.

AIRWORTHINESS REQUIREMENTS COMPLIANCE PROGRAM

Page 1 of 2 CP800-2

APPLICANT: AERO Design Ltd. 2013 39th Avenue NE

Calgary, Alberta, T2E 6R7

DATE: 2 December, 2008

REV. No. 0

MAKE: Bell

MODEL: 206L Series, 407

REGISTRATION: All Applicable

SERIAL No.: All Applicable

(If other than applicant)

CORRESPONDANCE TO:

NATURE OF WORK: Installation of Quick Release Step onto existing Quick Release Mounting Provisions

MODEL CERTIFICATION BASIS: FAR 27, Amendment 27-30, with exceptions as noted below. (Bell 407, highest of 206L Series and 407)

MODIFICATION CERTIFICATION BASIS: FAR 27, Amendment 27-30, with exceptions as noted below.

Airworthiness Requirement	Subject for Compliance or Documentary Proof	Form of Substantiation	DOT	DAR	Comments
Paragraph	Amdt.				
Subpart B –	Flight				
27.29 27.251	30 Empty Weight and Corresponding C of G30 Vibration	Data specified on inst'n drawing Statement in Report		X **	
Subpart C –	Strength Requirements				
27.301 27.301 27.303 27.305 27.307 27.337(a) 27.561	 30 Loads – Air Drag/Lift Loads 30 Loads – Inertia Loads 30 Factor of Safety 30 Strength and Deformation 30 Proof of Structure 30 Limit Maneuvering Load Factor – Positive 24 Emergency Landing Conditions 	Analysis Compliance with 27.337 and 27.561 Analysis Analysis and Test iaw AC 43.13-1B Analysis and Test iaw AC 43.13-1B Analysis and Test iaw AC 43.13-1B N/A		× × × × × ×	Critical load factor in downward direction. Step is located below cabin, not above or behind occupants.
Subpart D –	Design and Construction				
27.601 27.603 27.605 27.609 27.611	 30 Design 30 Materials 30 Fabrication Methods 30 Protection of Structure 30 Inspection Provisions 	Drawings Drawings Drawings Drawings Drawings Drawings		X X X X	Design is conventional. Materials used are specified in Mil-Hdbk-5J. Design is conventional. Design is easy to inspect.

AIRWORTHINESS REQUIREMENTS COMPLIANCE PROGRAM

Airworthiness Requirement		Subject for Compliance or Documentary Proof	Form of Substantiation	DOT	DAR	Comments
Paragraph	Amd		1 Offit of Substantiation	DOT	DAK	Comments
27.613	30	Material Strength Properties and Design Values	Values used as per Mil-Hdbk-5J		X	
27.625 27.629	30 30	Fitting Factor Flutter	Analysis Statement in Report		X **	
27.783 27.807	30 30	Doors Emergency Exits	N/A N/A		Х	Installation does not block doors. Installation does not block doors.
27.1387 27.1401	30 30	Position Light System Dihedral Angles Anticollision Light System	N/A N/A			No change from Type Approval. No change from Type Approval.
Subpart G – 0	Operat	ting Limitations and Information				
27.1505 27.1529	30 30	Never Exceed Speed Maintenance Manual	N/A ICA Provided	Х		No change from Type Approval.
27.1581	30	Rotorcraft Flight Manual – General	Flight Manual Supplement	Х		Existing FMS for basket updated.
Airworthines	s Man	ual Requirements				
527.1581(e)		Rotorcraft Flight Manual – Units	SI and Imperial Units provided in Flight Manual Supplement	Χ		
ems marked **	indica	te chapters where extension of delegation is	requested.			

AERO Design Ltd.

Project Summary

PS800-2, Revision 0, 2 December, 2008

Title: Quick Release Step Installation

Approval: STC

Manufacture: Mfd by Aero Design (amend Approved Producuct List)

Customer: AERO Design Ltd.

Type and Model: Bell 206L Series & 407

Definition Of Change:

Description:

Installation of a Quick Release Step using the Mounting Provisions supplied for use with the Quick Release Cargo Basket. The step is an aluminum extrusion, with aluminum brackets welded to the end. The step locks into the same mechanism as the basket.

Primary Changes to the Aeronautical Product:

Installation of quick release step.

Secondary Changes to the Aeronautical Product (Required as consequence of primary changes):

Other Relevant Modifications to the Aeronautical Product (Which impact on this change):

CHAI	NGED PRO	DDUCT RULE (CPR) DECISION RECORD				
NAPA No.:						
Step 1: Identify the proposed change to the aeronautical product.	The changes are as previously described.					
(Section 4.1 of AC 500-016)						
Step 2: Is the change substantial?	☐ Yes	A new type certificate is required. CPR Decision Process is Closed.				
(Section 4.2 of AC 500-016)	⊠ No	Proceed to Step 3				
Step 3: Will the latest standards be used?	☐ Yes	Certification basis to use latest standards. CPR Decision Process is Closed.				
(Section 4.3 of AC 500-016)	⊠ No	Proceed to Step 4.				
Step 4: Is the proposed change	☐ Yes	Proceed to Decision.				
significant? (Section 4.4 of AC 500-016)	⊠ No	Compliance may be shown to earlier standards. Certification basis to be defined and documented as indicated (below). CPR Decision Process is Closed .				
Decision: Will the latest standards be	☐ Yes	Certification basis to use latest standards. CPR Decision Process is Closed.				
used?	⊠ No	Proceed to Step 5, addressing each area separately (see below).				
Identification of Affected Areas:	The area	a(s) affected by the proposed change have been detailed in Compliance Program:				
Note: A delegate may develop a propo	sal for the	Yes/No decision of Step 6, however, TCCA will make the final determination.				
Area:						
Step 5: Is this area affected by the	☐ Yes	Proceed to Step 6.				
proposed change?	⊠ No	Compliance with the latest standards is not required. Compliance may be shown				
(Section 6.1 of AC 500-016)		to earlier standards. Certification basis defined or documented as indicated below.				
Step 6: Are the latest standards practical	☐ Yes	Certification basis to be established using latest standards.				
and do they contribute materially to the level of safety?	⊠ No	Compliance with the latest standards is not required. Compliance may be s				
(Section 6.2 of AC 500-016)		to earlier standards. Certification Basis defined or documented as indicated in below.				
☐ Continuation Sheet(s) Attached		Note: Several standards may apply to each area and the assessment may differ from standard to standard. Indicate Yes if compliance with any latest standard(s) will be required. Indicate No only if no later standards are to be applied.				
Certification Basis		fication basis is as follows or as detailed in the listed document(s):				
	Bell 407, TCDS H-92: FAR part 27, dated October 2, 1964 Amendment 27-1 through 27-30; Paragraph 27.561(b)(3) at Amdt 27-24; Section 27.563 at Amdt. 27-25; Section 27.785 at Amdt 27-24; Section 27.1093 at amendment 27-8; and Section 27.173 and 27.175 at amendment 27-1. Exemptions to FAR 27 are the deletion of sections: 27.562, 27.1195, and 27.952(b)(1)					
Under the delegated authority, I have exam determine, to the best of my knowledge and		nange in type design listed above according to established procedures and hereby t it is. (check one)				
substantial, pursuant to subsection						
significant, pursuant to subsection	. ,	•				
not significant, pursuant to subsect	ion 511.13	(3) or 513.07(3) of the CARs				
IN ISY		2 December, 2008				
E. Burgoin, P. Eng., DAR 290M		Date				

	MODIFICATION APPROVA	L REC	QUEST APP	LICATIO	ON FO	RM	MOD800)-2, Rev. 0	
1.	NAME AND ADDRESS OF APPLICANT:	2. I	DENTIFICATION	OF PRODU	СТ				
	AERO Design Ltd. 2013 - 39th Avenue NE	MAK	E:		M	MODEL:			
	Calgary, Alberta T2E 6R7	Be	Bell			206L Series, 407			
	ALL CORRESPONDANCE TO: AERO Design Ltd.	SERI	SERIAL No.:			REGISTRATION:			
	2013 - 39th Avenue NE	All	l Eligible			All Eligible			
	Calgary, Alberta T2E 6R7								
3.	REQUEST FOR:								
	A. SUPPLEMENTAL TYPE CERTIFICATE (STC)								
	B. STC/STA REVISION	\boxtimes	STC/STA No. SH	H00-48					
	C. LIMITED SUPPLEMENTAL TYPE CERTIFICATE (LSTC)								
	D. LIMITED STC/STA REVISION		LSTC/LSTA No.						
	E. F.A.A. SUPPLEMENTAL TYPE CERTIFICATE								
	F. F.A.A. STC REVISION		STC No.						
	G. FAMILIARIZATION OF F.A.A. STC		STC No.						
	H. REPAIR DESIGN APPROVAL (RDC)								
	I. PARTS DESIGN APPROVAL (PDA)								
4.	TITLE OF MODIFICATION OR REPAIR: Quick Release Mounting Provisions Installation; Quick Release Ba	aakat Ina	tallation: Oviak Bal	lagas Stan I	notallatio			<u> </u>	
5.	BRIEF DESCRIPTION OF MODIFICATION OR REPAIR:	asket ins	taliation; Quick Rei	ease Step I	nstallatio	n			
	Installation of external quick release mounting provisions, and installed on the quick release provisions when the basket is removed.	tallation o	of a cargo basket o	n those prov	visions. T	This revision ac	lds a step ti	hat may be	
6.	APPLICABLE TYPE APPROVAL (TA) OR TYPE CERTIFICATE	(TC) DO	CUMENTS:						
	A. TA NO. H-92 B. TC No	С	OTHER						
7.	PROPOSED BASIS OF APPROVAL:								
	A. SAME AS TA 🛛 B. SAME AS TC 🗀	С	. OTHER	(Please s	specify)				
8.				REQL	JIRED	FOR	DOT USE	ONLY	
	DOCUMENTATION CHECKLIST						RECEIVED)	
_	COMPLIANCE DE CORMI			YES	NO	YES	NO	DATE	
_	COMPLIANCE PROGRAM			X					
_	MASTER DRAWING LIST			X			10-1-10-10-10-10-10-10-10-10-10-10-10-10		
_	FLIGHT MANUAL SUPPLEMENT MAINTENANCE MANUAL SUPPLEMENT			X	.,				
-	INSTRUCTIONS FOR CONTINUING AIRWORTHINESS				X				
_	ENGINEERING REPORTS			<u>х</u>					
	DESIGN DRAWINGS				X				
	MANUFACTURE DRAWINGS & INSTALLATION INSTRUCTIONS	S		X					
	ELECTRICAL LOAD ANALYSIS				X				
	DRAFT STC, LSTC OR RDA				X				
	WEIGHT AND MOMENT CHANGE			Х		TO THE STATE OF			
	FLIGHT TEST DATA				Х				
	OTHER (Specify)								
9.	APPLICANT'S REMARKS:								
10.	In addition to the payment of Aircraft Certification approval fees as prescrib- incremental expenses as in Aviation Regulation Directive No. 3, or equivale	ed in Cana ent, as app	adian Aviation Regula dicable. For further de	tions (CAR) setails governi	Section 104 ng cost rec	4, I agree to reim covery, refer to Al	burse Transp MA 513/4.	oort Canada	
	PER: ST	Cons	sultant				2 Decemb	er, 2008	
	SIGNATURE OF APPLICANTS	TITLE					DATE		
11.									
	SIGNATURE OF REGIONAL ENGINEER						DATE		